

From: Ray Tarker <RTarker@bgjwsc.org>
To: Gary Reynolds <Gary.Reynolds@dnr.state.ga.us>
CC: Keith Morgan <kmorgan@bgjwsc.org>
Date: 4/28/2011 3:22 PM
Subject: Wastewater Spill Incident - S. Palm Drive

Gary;

Our sampling results taken on the Monday following the Thursday incident report, indicates water quality well within parameters, thanks in part to the rain event the day we completed the work. To get you a more thorough report together, regarding the quantity of the wastewater spill, I will need some additional time. I have gotten with the Glynn County Public Works Department and have come up with a date that they worked this ditch, but I have no idea of how much wastewater Westminster Apartments discharges on a daily basis. In an effort to establish this I will need to do a couple of days of flow monitoring on their line.

We can schedule this task for next Monday, with your indulgence, and be able to better document and quantify the spill for the records. Proceeding in this manner, I would not be able to provide you with my final report until next Wednesday.

In the interim, I will continue the stream postings and sampling procedures we have established...just to be prudent.

Since we are working with a private system in this case, (especially because we will be seeking reimbursement for our expense in handling this Public Health/Environmental Emergency Repair), we need to be particularly thorough and detailed.

If this approach is satisfactory, and you can give me another week to provide a final report, it would be appreciated.

Thank you.

Ray Tarker

From: Ray Tarker <RTarker@bgjwsc.org>
To: Gary Reynolds <Gary.Reynolds@dnr.state.ga.us>
Date: 4/27/2011 11:07 AM
Subject: RE: Wastewater Spill Incident

No, I have talked to them in detail and there is an "understandable" reason for their problems hitting this line. They have agreed to let us put up signs on both sides, directly over the gravity line which is usually under the water level and not seen. This situation is complicated by the fact that there is a water line crossing the ditch within 3 foot of the gravity line, but well above the water level and visible. They work around the water line but hit the sewer line that they can not see.....

Our repair methodology was to replace the gravity line, (previously a DIP slip joint line with several repair clamps from previous breaks), into a 12" steel casing strung through with an 8" HDPE pipe. We consider this a permanent repair and will be seeking reimbursement for our work from Westminster.

-----Original Message-----

From: Gary Reynolds [mailto:Gary.Reynolds@dnr.state.ga.us]
Sent: Wednesday, April 27, 2011 8:16 AM
To: Ray Tarker
Subject: RE: Wastewater Spill Incident

They need to provide protection around that aerial pipe, or even consider rerouting or burying so it isn't hit. Please pass that to Glynn County Road Dept....do I need to speak to Glynn County Public Works about it?

>>> Ray Tarker <RTarker@bgjwsc.org> 4/27/2011 7:18 AM >>>
Gary;

Yes. Quantifying the spill will be difficult. This pipe was most likely broken by Glynn County Public Works personnel some weeks or perhaps a month ago. They have hit this pipe at least once a year and several of their folks have undergone disciplinary actions because of it....so there is a fear in that organization for admitting their mistake and not reporting it in the hopes that it will not be recognized for a long time with the damage not being blamed on their work. We are working with the County Public Works in an attempt to see when they last worked that ditch in the hopes of identifying a date when it happened....and there by a time frame on which we can estimate the amount of spillage.

Ray Tarker

-----Original Message-----

From: Gary Reynolds [mailto:Gary.Reynolds@dnr.state.ga.us]
Sent: Wednesday, April 27, 2011 7:10 AM
To: Ray Tarker
Subject: RE: Wastewater Spill Incident

Ray, I hope you are doing well...please include an estimate of gallons either spilled or release. Of course, it will be an estimate, as not sure how long the spill occurred.

>>> Ray Tarker <RTarker@bgjwsc.org> 4/27/2011 6:29 AM >>>
Gary;

I will be receiving the results of our sampling tomorrow and send you a follow-up or hopefully a final report. At this point I feel that the designation of a "minor spill" would be appropriate as this spill has been going on for an undefined amount of time and downstream D.O. levels were rather low in a couple of places. I need to see the fecal counts, pH and initial BOD to better quantify the damage to water quality. After you and I get together on this we can better classify and structure how we proceed going forward.

Thank you.
Ray Tarker

-----Original Message-----

From: Gary Reynolds [mailto:Gary.Reynolds@dnr.state.ga.us]
Sent: Tuesday, April 26, 2011 11:18 AM
To: Ray Tarker
Subject: Re: Wastewater Spill Incident

Your extra efforts are appreciated...as you blocked the canal, it appears this is a "release", although before you blocked, probably a minor spill. So far as sampling beyond the initial, wouldn't think you'd need to continue that. If only release, not necessary to notify agencies, etc., nor post; however, on the side of caution, since already posted, you may want to leave for 7 days after the incident as though a minor spill.

>>> Ray Tarker <RTarker@bgjwsc.org> 4/21/2011 4:47 PM >>>
Gary;

We were contacted yesterday afternoon by Glynn County Public Works saying that there was a broken sewer line in the drainage channel behind 116 South Palm Drive, off of Highway 17 (Darien Highway). Upon investigation we found that the broken 8" gravity sewer line was a privately owned line belonging to Westminster Club Apartments at 3901 Darien Highway (Highway 17).

This line was separated in the drainage ditch, (apparently pulled apart), allowing raw wastewater to escape into the stream; however, there was very little sewer coming from the pipe itself because it was also pulled apart at another joint that was buried, and had developed a cavity trapping solids. The liquid portion of the wastewater was seeping through the ground and discharging into the stream along both sides of the stream bank, two or three feet upstream and downstream of the broken pipe.

Despite this being a private problem, and per our protocol, we immediately moved to Emergency Procedures and declared the site to be a Public Health/Environmental Emergency.

We have taken the following actions to date:

Wednesday, April 20th.

1. Constructed dams upstream and downstream of the spill site to confine the wastewater and controlled wastewater through the confined area by directing it into the pipe on the opposite bank of the drainage ditch and back into the public gravity sewer system.
2. Used Vacuum Equipment to evacuate the observable wastewater within the confined area and downstream approximately 100 feet; (the construction of the dams caused some turbidity downstream; however, while the cleaning process was in progress there was little evidence of contamination and abundant minnows observed in this very shallow, low velocity channel with its numerous ponding areas).

Thursday, April 21st.

1. Reported the incident to the Property Manager of Westminster Club Apartments (Pat Smith @ 912-264-4832) and asked for permission to enter upon the Westminster property to make the necessary repairs; (Westminster staff and management were very cooperative and assisted in removing a portion of the complex's fence to uncomplicate our access.
2. Set-up five (5) stream monitoring points (1-upstream of the break and 4-downstream at approximate 300 foot intervals; deployed our lab personnel to take grab samples at these locations to report BOD, pH, DO, and fecal coli form levels; (with the exception of BOD the results of these samples will be available by Monday); a preliminary stream monitoring program is established to take additional samples on Monday and Wednesday and will be extended upon review of these initial samples and/or direction from EPD.
3. Completed the repair of the failed creek crossing piping system by installing a steel casing with HDPE

carrier pipe and reconnecting to both ends of the existing piping system using Fernco couplings; (the steel casing was supported by heavy granite gravel anchored together with the casing pipe with concrete;

Pending Actions:

Friday, April 22nd.

1. Installation of signs downstream of the spill site at 200 foot spacing to notify local residents of potential stream contamination.
2. Site clean-up, removal of confining dams to re-open the drainage channel.

Monday, April 25th.

1. Sampling of sites for analysis.

Wednesday, April 27th.

1. Sampling of sites for analysis.
2. Submittal of Report to EPD.

Please consider this our preliminary report of the incident. A final report, next week, will detail more particulars. We believe this damage to the pipe was the result of work being performed by Glynn County to keep their drainage facilities clear and open, as relatively fresh teeth marks on the pipe were observed. Our investigation, next week will attempt to define a time when this damage occurred and enable us to make some estimate of the amount of wastewater escaped to the environment.

Thank you.

Ray Tarker

From: Ray Tarker <RTarker@bgjwsc.org>
To: Gary Reynolds <Gary.Reynolds@dnr.state.ga.us>
CC: Keith Morgan <kmorgan@bgjwsc.org>, John Hunkele Jr. <JHunkele@bgjwsc.org...>
Date: 4/21/2011 4:48 PM
Subject: Wastewater Spill Incident

Gary;

We were contacted yesterday afternoon by Glynn County Public Works saying that there was a broken sewer line in the drainage channel behind 116 South Palm Drive, off of Highway 17 (Darien Highway). Upon investigation we found that the broken 8" gravity sewer line was a privately owned line belonging to Westminster Club Apartments at 3901 Darien Highway (Highway 17).

This line was separated in the drainage ditch, (apparently pulled apart), allowing raw wastewater to escape into the stream; however, there was very little sewer coming from the pipe itself because it was also pulled apart at another joint that was buried, and had developed a cavity trapping solids. The liquid portion of the wastewater was seeping through the ground and discharging into the stream along both sides of the stream bank, two or three feet upstream and downstream of the broken pipe.

Despite this being a private problem, and per our protocol, we immediately moved to Emergency Procedures and declared the site to be a Public Health/Environmental Emergency.

We have taken the following actions to date:

Wednesday, April 20th.

1. Constructed dams upstream and downstream of the spill site to confine the wastewater and controlled wastewater through the confined area by directing it into the pipe on the opposite bank of the drainage ditch and back into the public gravity sewer system.
2. Used Vacuum Equipment to evacuate the observable wastewater within the confined area and downstream approximately 100 feet; (the construction of the dams caused some turbidity downstream; however, while the cleaning process was in progress there was little evidence of contamination and abundant minnows observed in this very shallow, low velocity channel with its numerous ponding areas).

Thursday, April 21st.

1. Reported the incident to the Property Manager of Westminster Club Apartments (Pat Smith @ 912-264-4832) and asked for permission to enter upon the Westminster property to make the necessary repairs; (Westminster staff and management were very cooperative and assisted in removing a portion of the complex's fence to uncomplicate our access.
2. Set-up five (5) stream monitoring points (1-upstream of the break and 4-downstream at approximate 300 foot intervals; deployed our lab personnel to take grab samples at these locations to report BOD, pH, DO, and fecal coli form levels; (with the exception of BOD the results of these samples will be available by Monday); a preliminary stream monitoring program is established to take additional samples on Monday and Wednesday and will be extended upon review of these initial samples and/or direction from EPD.
3. Completed the repair of the failed creek crossing piping system by installing a steel casing with HDPE carrier pipe and reconnecting to both ends of the existing piping system using Fernco couplings; (the steel casing was supported by heavy granite gravel anchored together with the casing pipe with concrete;

Pending Actions:

Friday, April 22nd.

1. Installation of signs downstream of the spill site at 200 foot spacing to notify local residents of potential stream contamination.
2. Site clean-up, removal of confining dams to re-open the drainage channel.

Monday, April 25th.

1. Sampling of sites for analysis.

Wednesday, April 27th.

1. Sampling of sites for analysis.
2. Submittal of Report to EPD.

Please consider this our preliminary report of the incident. A final report, next week, will detail more particulars. We believe this damage to the pipe was the result of work being performed by Glynn County to keep their drainage facilities clear and open, as relatively fresh teeth marks on the pipe were observed. Our investigation, next week will attempt to define a time when this damage occurred and enable us to make some estimate of the amount of wastewater escaped to the environment.

Thank you.

Ray Tarker

Wednesday, April 27th.

1. Sampling of sites for analysis.

Friday, April 29th.

1. Sampling of sites for analysis.

N/A:
revised report
to indicate
(release)
5-10-11

Estimated Quantity of Spill:

In our attempt to ascertain the estimated quantity of the wastewater spill we contacted Glynn County Public Works Field Supervisor Larry Little to hear when they last worked in this area clearing ditches. He advised that they had worked in this area around March 24, 2011; however, he advised that they were not accepting any responsibility for the pipe damage despite their long history of hitting this particular pipe in past. We therefore used the beginning date of spill to be March 24th, 2011 and the ending date of the spill to be April 20, 2011; (26 days).

To determine the daily quantity of the spill, we placed a flow monitor in the upstream gravity system for a 24-hour period. The results of this monitoring indicated an **87,843 gpd** discharge as measured on Monday thru Tuesday beginning on Monday, May 2nd @ approximately 9:00 a.m. and ending at 9:00 a.m. on May 3rd; (this quantity would vary daily and may be somewhat higher or lower depending on the day of the week, but considering the rather stable usage in this type of system we believe that this figure is applicable and within reason).

We therefore used the 87,843 gpd discharge rate in our calculation, which produced the estimated spill to be approximately 2,283,908 gallons over the 26 day spill period. (See attached flow monitoring report).

Stream and Water Quality Affects of Spill:

Based on our sampling program, (4 sites downstream of the spill site and one site upstream of the spill site for background), we observed high levels of wastewater contamination along the ditch line and at its discharge to the marsh adjacent to Highway 17. Confining the spill and then making the repair under emergency protocol, with the help of a rain event in the evening hours of April 21st the stream quality recovered quickly. (See attached Sampling Spreadsheet). We terminated our sampling program as of Friday, April 29th as sampling results indicated that the stream quality had been restored within background sampling parameters.

Please consider this report as our Final Report of the Incident and advise if any other information or action is required.

Thank you.

Ray Tarker

**To: Department of Natural Resources
400 Commerce Center Drive
Brunswick, GA. 31523-8251
(Attn: Gary Reynolds)**



**From: Brunswick-Glynn Joint Water & Sewer Commission
700 Gloucester Street Suite 300
Brunswick, GA 31520
(R.E. Tarker, Jr. Superintendent SP&M Division)**

Date: May 12, 2011

Re: Revision to Final Report on April 20, 2011 Spill Incident @ Westminster Apartment Complex

The JWSC was contacted Wednesday, April 20, 2011 at approximately 2 p.m. by Glynn County Public Works saying that there was a broken sewer line in the drainage channel behind 116 South Palm Drive, off of Highway 17 (Darien Highway). Upon investigation we found a broken 8" gravity sewer line draining into a ditch that ultimately discharges to the marsh to the east of the site (see attached maps). This gravity sewer line is a privately owned line belonging to Westminster Club Apartments at 3901 Darien Highway (Highway 17) and their responsibility for O&M. The contact person for Westminster Apartments is Pat Smith @ 912-264-4832.

This gravity sewer line was separated in the drainage ditch, (apparently pulled apart), allowing raw wastewater to escape into the stream; however, there was very little sewer coming from the pipe itself because it was also pulled apart at another joint that was buried, and had developed a cavity trapping solids and providing some filtration. The liquid portion of the wastewater was seeping through the ground and discharging into the stream along both sides of the stream bank, two or three feet upstream and downstream of the broken pipe.

Despite this being a private problem, and per our protocol, we immediately moved to Emergency Procedures and declared the site to be a Public Health/Environmental Emergency.

The following actions were taken by the JWSC on an emergency basis:

Wednesday, April 20th. (Approximately 3 p.m.)

1. Constructed dams upstream and downstream of the spill site to confine the wastewater and controlled wastewater through the confined area by directing it into the pipe on the opposite bank of the drainage ditch and back into the public gravity sewer system.
2. Used Vacuum Equipment to evacuate the observable wastewater within the confined area and downstream approximately 100 feet;
3. This ditch is a very low or no-flow flow ditch in dry weather with numerous ponding areas along its run to the marsh which appeared, at this date, to be holding most of the ditch's flow; while we were vacuuming the ditch downstream from the break there was little visible evidence of wastewater contamination except in several ponding areas within 100 feet of the break and abundant minnow life was observed even in the closest ponding areas.
4. The construction of the dams caused some turbidity downstream, which quickly settled out. These dams were approximately 3 feet high and were not over-topped when we came back to do the repair the next morning.

Thursday, April 21st.

1. Reported the incident to the Property Manager of Westminster Club Apartments (Pat Smith @ 912-264-4832) and asked for permission to enter upon the Westminster property to make the necessary repairs; (Westminster staff and management were very

cooperative and assisted in removing a portion of the complex's fence to uncomplicate our access.

1. Set-up five (5) stream monitoring points (1-upstream of the break and 4-downstream at approximate 300 foot intervals; deployed our lab personnel to take grab samples at these locations to report BOD, pH, DO, Temperature, BOD₅ and Fecal levels; (with the exception of BOD the results of these samples will be available by Monday); a preliminary stream monitoring program was established to take additional samples along the entire length of the ditch to its terminus at the marsh on Highway 17, (Darien Highway).
2. Completed the repair of the failed creek crossing piping system by installing a steel casing with HDPE carrier pipe and reconnecting to both ends of the existing piping system using Fernco couplings; (the steel casing was supported by heavy granite gravel anchored together with the casing pipe with a concrete, thereby encasing the pipe).

Friday, April 22nd.

1. Installed/Posted signs downstream of the spill site at 200 foot spacing to notify local residents of potential stream contamination;
2. Site clean-up, removal of confining dams to re-open the drainage channel.

Monday, April 25th.

1. Sampling of sites for analysis.

Wednesday, April 27th.

1. Sampling of sites for analysis.

Friday, April 29th.

1. Sampling of sites for analysis.

Estimated Quantity of Spill:

In our attempt to ascertain the estimated quantity of the wastewater spill we contacted Glynn County Public Works Field Supervisor Larry Little to hear when they last worked in this area clearing ditches. He advised that they may have worked in this area around March 24, 2011; however, he advised that they were not accepting any responsibility for the pipe damage despite their long history of hitting this particular pipe in past. Unable to pinpoint the date or time of the break must therefore assume the report date is the break date. We therefore can only use the amount of visible contaminated wastewater that was vacuumed from the ditch as the quantity of wastewater spilled, which was approximately 5,000 gallons.

The other approach would be to estimate the monitored flow from the Apartment Complex from the spill report date and time (2 p.m. on April 20th to the time when we confined the discharge, being approximately 3 p.m. April 20th). Referring to flow monitoring records for this period this would amount to approximately 4,480 gallons.

We therefore recommend the use of the 5,000 gallon quantity rather than the originally submitted quantity that was based on the improvable assumptions used in our original report dated May 9, 2011; and request that this be regarded as a Release rather than a Major Spill.

Stream and Water Quality Affects of Spill:

Based on our sampling program, (4 sites downstream of the spill site and one site upstream of the spill site for background), we observed high levels of wastewater contamination along the ditch line and at its discharge to the marsh adjacent to Highway 17. Confining the spill and then making the repair under emergency protocol, with the help of a rain event in the evening hours of

April 21st the stream quality recovered quickly. (See attached Sampling Spreadsheet). We terminated our sampling program as of Friday, April 29th as sampling results indicated that the stream quality had been restored within background sampling parameters.

Please consider this report as our Final Report of the Incident and advise if any other information or action is required.

Thank you.

R.E. Tarker, Jr.

A handwritten signature in black ink, appearing to be "R.E. Tarker, Jr.", written over the printed name.

